

Claims

- [c1] A computer program product for message traffic interception comprising:
a computer-readable medium;
a protocol independent API core module stored on the medium, the API core module having an array of predetermined rules for intercepted message traffic;
and
an interface communication emulator module communicatively coupling protocol-specific message traffic to the API core.
- [c2] The computer program product of claim 1 further comprising a message database communicatively coupled to the API core module, the message database further comprising an array of message properties for each message.
- [c3] The computer program product of claim 2 wherein the array of message properties further comprise message interpretation data.
- [c4] The computer program product of claim 2 wherein the array of message properties further comprise message formatting data.
- [c5] The computer program product of claim 2 wherein the array of message properties further comprise message routing data.
- [c6] The computer program product of claim 2 wherein the array of message properties further comprise message default values.
- [c7] The computer program product of claim 2 wherein the array of message properties further comprise message transmission rules.
- [c8] The computer program product of claim 2 wherein the array of message properties further comprise enable-lockout combination data.
- [c9] The computer program product of claim 2 wherein the array of message properties further comprise limits on message field values.
- [c10] The computer program product of claim 2 wherein the array of message properties further comprise message field units.

- [c11] The computer program product of claim 2 wherein the array of message properties further comprise user-defined identifiers.
- [c12] The computer program product of claim 2 wherein the array of message properties further comprise interface information.
- [c13] The computer program product of claim 2 further comprising a scenario module communicatively coupled to the message database, the scenario module further comprising state machine emulation definition, the definition providing event-driven parameters responsive to message traffic.
- [c14] The computer program product of claim 13 wherein the event-driven parameters discriminate between messages based on message identification.
- [c15] The computer program product of claim 13 wherein the event-driven parameters discriminate between messages based on message contents.
- [c16] The computer program product of claim 13 wherein the event-driven parameters discriminate between messages based on message occurrence.
- [c17] The computer program product of claim 13 wherein the event-driven parameters discriminate between messages based on message frequency.
- [c18] The computer program product of claim 13 wherein the event-driven parameters discriminate between messages based on a count of the number of times an event's parameters have been satisfied.
- [c19] The computer program product of claim 13 wherein the event-driven parameters discriminate between messages based on a comparison with variables.
- [c20] The computer program product of claim 13 wherein an event defined by the event-driven parameters modify the contents of a message.
- [c21] The computer program product of claim 13 wherein an event defined by the event-driven parameters route a message.
- [c22] The computer program product of claim 13 wherein an event defined by the

event-driven parameters delete a message.

- [c23] The computer program product of claim 13 wherein an event defined by the event-driven parameters controls other events.
 - [c24] The computer program product of claim 13 wherein an event defined by the event-driven parameters performs calculations.
 - [c25] The computer program product of claim 13 wherein an event defined by the event-driven parameters controls user displays.
 - [c26] The computer program product of claim 13 wherein an event defined by the event-driven parameters extracts at least one value from a message.
 - [c27] The computer program product of claim 13 wherein an event defined by the event-driven parameters creates and sends an arbitrary message defined in the database.
 - [c28] The computer program product of claim 13 wherein an event defined by the event-driven parameters transforms an incoming message into a different message defined in the database.
 - [c29] The computer program of claim 13 wherein the actions triggered by an event provide logical branching, looping, iteration, and internal or external subroutine calling capability.
 - [c30] The computer program product of claim 13 wherein the communications interface emulator module is communicatively coupled to the scenario execution module which is communicatively coupled to the message database whereby messages are received, reformatted into a message database compliant structure and outbound messages generated by the scenario module are passed back to the communications interface emulator module for protocol-specific transmissions
- The computer program product of claim 13 further comprising a post-test data analysis capability wherein recorded data may be analyzed, abstracted, and displayed in a variety of text and graphical formats.